WHAT IS CLAIMED IS:

1. A method of monitoring the proliferation of cultured prostate cancer cells in the presence of perillyl alcohol (POH), comprising the steps of:

contacting said prostate cancer cells with POH or a derivative thereof; and

determining the transactivating ability of an androgen receptor,

wherein a decrease in the transactivating ability of said androgen receptor is indicative of an inhibitory effect by POH on the proliferation of said prostate cancer cells.

2. The method of claim 1, wherein said prostate cancer cells are LNCaP cells or LAPC-4 cells.

3. A method of treating an individual with prostate cancer or at risk of developing prostate cancer, comprising the steps of:

identifying an individual with prostate cancer or at risk of developing prostate cancer;

administering a dose of perillyl alcohol (POH) or a derivative thereof to said individual effective to inhibit the transactivating ability of an androgen receptor; and

monitoring the transactivating ability of said androgen receptor in said individual,

wherein inhibiting the transactivating ability of said androgen receptor inhibits the proliferation of prostate cancer cells, thereby treating said individual.

4. The method of claim 3, wherein said administration is selected from the group consisting of oral, transdermal, intravenous, intraperitoneal, and inplanted.

5. The method of claim 3, wherein said effective dose is from about 100 mg/kg to about 300 mg/kg.

6. The method of claim 3, wherein said individual is a human.

7. A method of reducing the risk of recurrence of prostate cancer in an individual, wherein said individual previously had been treated for prostate cancer, comprising the step of:

administering a dose of perillyl alcohol (POH) or a derivative thereof to said individual effective to inhibit the transactivating ability of an androgen receptor,

wherein inhibiting the transactivating ability of said androgen receptor inhibits the proliferation of prostate cancer cells, thereby reducing the risk of recurrence of prostate cancer in said individual.

8. The method of claim 7, further comprising the step of:

monitoring the transactivating ability of said androgen receptor in said individual.

9. The method of claim 7, wherein said previous treatment for prostate cancer in said individual comprised a radical prostectomy.

10. A method of treating an individual with benign prostatic hyperplasia (BPH), comprising the steps of:

identifying an individual with BPH; and

administering a dose of perillyl alcohol (POH) or a derivative thereof to said individual effective to inhibit the transactivating ability of an androgen receptor,

thereby treating said BPH in said individual.

11. The method of claim 10, further comprising the step of:

monitoring the transactivating ability of said androgen receptor in said individual.

12. A method of screening for compounds that inhibit the proliferation of prostate cancer cells, comprising the steps of:

contacting prostate cancer cells with a compound; and

determining the transactivating ability of an androgen receptor,

wherein decreased transactivating ability of said androgen receptor in said prostate cancer cells compared to prostate cancer cells not contacted with said compound is indicative of a compound that inhibits the proliferation of prostate cancer cells.

13. The method of claim 12, further comprising the steps of:

monitoring the transactivating ability of said androgen receptor in said prostate cancer cells.

14. The method of claim 12, wherein said prostate cancer cells are LNCaP cells or LAPC-4 cells.

15. A composition comprising:

perillyl alcohol (POH) or a derivative thereof,

one or more compounds that has a mechanism of action selected from the group consisting of:

inhibiting expression of a gene encoding an androgen receptor,

inhibiting nuclear localization of an androgen receptor, and

inhibiting the transactivating ability of an androgen receptor; and

a pharmaceutically acceptable carrier.

16. The composition of claim 15, wherein said compound is selected from the group consisting of silymarin, silibin, docosahexaenoic acid (DHA), eicosapentaenoic acid (EPA), quercetin, resveratrol, flufenamic acid, tea polyphenols, and anti-androgen compounds.

17. A composition comprising perillyl alcohol (POH) or a derivative thereof, wherein said POH or a derivative thereof is formulated for transdermal delivery to the prostate of an individual, wherein delivery to said prostate inhibits the transactivating ability of an androgen receptor.

18. A composition comprising perillyl alcohol (POH) or a derivative thereof, wherein said POH is formulated for implantation near the prostate of an individual, wherein said implantation near said prostate inhibits the transactivating ability of an androgen receptor.

19. An article of manufacture, comprising packaging material and the composition of claim 15, wherein said packaging material comprises instructions for using said composition to inhibit the transactivating ability of an androgen receptor in an individual.